### (19) World Intellectual Property Organization

International Bureau



## ! (BERT STRUCTUR DECINE SIER CON FORD BERT IN AND A COMPONING BERT STRUCTURE FOR STRUCTURE FOR STRUCTURE FOR I

(43) International Publication Date 26 May 2005 (26.05.2005)

PCT

# (10) International Publication Number WO 2005/047514 A1

(51) International Patent Classification<sup>7</sup>:

C12N 15/82

(21) International Application Number:

PCT/GB2004/004739

(22) International Filing Date:

10 November 2004 (10.11.2004)

(25) Filing Language:

**English** 

(26) Publication Language:

English

(30) Priority Data: 0326194.8

10 November 2003 (10.11.2003) GE

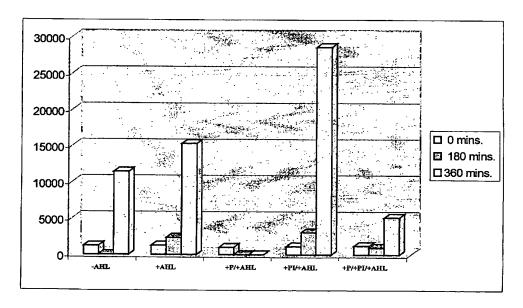
(71) Applicant (for all designated States except US): UNIVER-SITY OF KENT [GB/GB]; The Registry, University of Kent, Canterbury, Kent CT2 7NZ (GB).

- (72) Inventors; and
- (75) Inventors/Applicants (for US only): ROBINSON, Gary, Kevin [GB/GB]; 35 Pretoria Road, Canterbury CT1 1QL (GB). RISING, Hannah [GB/GB]; 40 The Meadows, Broomfield, Herne Bay CT6 7XF (GB).

- (74) Agents: HOWARD, Paul, Nicholas et al.; Carpmaels & Ransford, 43-45 Bloomsbury Square, Lodon WC1A 2RA (GB).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

#### (54) Title: PROTEINS INVOLVED IN SIGNAL TRANSDUCTION



(57) Abstract: The method relates to a method of modulating quorum sensing in bacteria. Quorum sensing is inhibited using peptide hydrolases. This inhibition is used to prevent biofilm formation or to break down established biofilms and may also be used to downregulate the production of virulence determinants by pathogenic bacteria. The invention also relates to the use of peptide hydrolase inhibitors for the upregulation of quorum sensing in bacteria, resulting in the overproduction of proteins and the use of this system as an expression system.



## WO 2005/047514 A1



#### Published:

- with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.